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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/081,120	02/22/2002	James W. Forbes	5699-11-CON	9348

21324 7590 12/16/2003

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EXAMINER	
JULES, FRANTZ F	

ART UNIT	PAPER NUMBER
3617	

DATE MAILED: 12/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/081,120	FORBES, JAMES W.	
	Examiner	Art Unit	
	Frantz F. Jules	3617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 November 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7,13-21,24,28,29,32-34,41-54 and 57-83* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *28,29,32-34 and 41-44* is/are allowed.

6)☒ Claim(s) *1,2,6,7,13-17,46-49, 52,54,57- 61,63-64,66-72, 78-79,81-83* is/are rejected.

7)☒ Claim(s) *3-5,18-21,24,50,53,62,65,73-77 and 80* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Objections

1. Claims 66-71 are objected to because of the following informalities:

In claim 66, line 8, the word "first" should be deleted before the phrase "articulated connector". Similar correction should be made to claim 66, line 10.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 14-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 14, lines 9-10, the phrase "a third of said rail car trucks is mounted under said second end of said second rail car unit" is confusing as it is unclear how it relates to previously recited second rail car trucks mounted under the second end of the first rail car unit.

Claims 15-17 are rejected as being dependent upon rejected base claim 14.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-2, 6-7, 13, 46-47, 58, 66-68, 72, 78 are rejected under 35 U.S.C. 102(b) as being anticipated by Lich (US 3,371,622).

Claims 1-2, 6-7, 13, 46

Lich teaches all the limitations of claims 1-2, 6-7, 13, 46 by showing in figs. 1-5, an articulated railroad freight car having a plurality of railcar units carried on a plurality of pivotally mounted railcar trucks (5, 7, 8), each said truck having spaced apart axles as shown in figs. 1-5, said plurality of railcar units including at least first and second railcar units (1, 3) connected at a cantilevered articulation (done by pin 55), said rail car trucks including a first rail car truck (8) located closer to said articulation connection than any other of said rail car trucks, said first rail car truck (8) being pivotally mounted to said first rail car unit (1), said articulation connection (55) being longitudinally eccentrically mounted relative to said first truck (1) as shown in fig. 5; and said articulation connection being operable to pass a vertical shear load from said second rail unit (3) to said first rail car unit (1) since no other structure exists underneath the end of rail car 3 to carry the vertical shear load from rail car 3 to rail car 1 other than the artculation connection 55.

The first railcar unit (1) having a first end (D) proximate to said articulation connection, and a second end (C) distant from said articulation connection ; said first rail car unit (1) has a first of said rail car trucks (8) pivotally mounted thereunder, said first railcar truck (8) being closer to said articulation connection than any other of said rail car trucks as shown in fig. 1; said first rail car truck (8) being located closer to said first end (D) of

said first rail car unit than to said second end (C) of the first rail car unit; and said articulation connection is longitudinally eccentric relative to said first rail car truck in accordance with claim 6.

Said second railcar unit (3) having a first end (B) proximate to said articulation connection, and a second end (A) distant from said articulation connection; said second rail car unit (3) has a second of said rail car trucks (7) mounted thereunder, said second rail car truck being located closer to said second end (A) of said rail car unit than to said first end (B) of said second rail car unit; and said second rail car unit (3) is free of rail car trucks between said articulation connection and said second rail car truck in accordance with claim 7.

Said first rail car unit (1) is supported by a second of said rail car trucks (5); and said second rail car truck is located closer to said second end (C) of said first rail car unit than to said first end (D) of the first rail car unit in accordance with claim 13.

Claims 47, 58, 66-68, 72, and 78

Lich teaches all the limitations of claims 47, 58, 66-68, 72 by showing in figs. 1-5 an articulated railroad freight car comprising at least first and second rail car unit (3, 1) connected at a cantilevered articulated connector (55) through which vertical shear loads are passed between said first and second rail car units (3, 1), said railroad freight car having a first end, and a releasable coupler (41) mounted at each of said first and second ends, said releasable couplers being operable to permit interchangeable operation with other railroad freight cars in North American service.

Said first and second rail car units (3, 1) each have at least one deck upon which vehicles can be loaded as shown in fig. 1 in accordance with claims 47, and 78.

Said first rail car unit (3) has a first end (A) and a second end (B); and said second rail car unit (1) has a first end (D) and a second end (C); said second end (B) of said first railcar unit (3) is joined to the first end (D) of the second rail car unit (1) at said articulated connector (55); the second rail car unit (1) is supported upon a pair of pivotally mounted, spaced apart, first and second two-axle railcar trucks (8, 5), each of said trucks having a truck center as shown in fig. 5; said first truck (8) of said second rail car is located closer to said articulated connector than any other truck of said railroad car; and said articulated connector is offset from said truck center of the first truck (8) in accordance with claim 66.

The first rail car unit (3) has a two axle truck (7) pivotally mounted thereunder, and said two axle truck of said first rail car unit is located closer to the first end (A) of the first rail car unit than to said second end (B) of the first rail car unit in accordance with claim 67.

A coupler being mounted at the first end (A) of the first rail car as shown in fig. 1 in accordance with claim 68.

Said plurality of rail car trucks include a pair of first and second spaced apart, two-axle railcar trucks (8, 5) pivotally mounted to said second railcar unit (1); said first two-axle truck is mounted closer to said first articulated connector than is any rail car truck of said articulated rail road freight car; said first two-axle rail car truck (8) has a truck center, and said truck center of said first two-axle truck is longitudinally offset from said articulated connector in accordance with claim 72.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 14-15, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lich in view of Bock et al (US 2,865,306).

Claims 14-15, and 17

Lich discloses an articulated railroad freight car comprising at least first and second railcar units (3, 1) connected at a cantilevered articulation (51), said railroad freight car (20) having a first end, a second end, and a releasable coupler (45) mounted at each of said first and second ends, said releasable couplers (22) being operable to permit interchangeable operation with other railroad freight cars in North American service. The first railcar unit having a first and second end (A, B), said second railcar unit having a first and second end (C, D); said second end (B) of said first railcar unit is joined to the first end (D) of the second railcar unit at a first articulation connection (55); the second railcar unit (1) is supporting upon a pair of pivotally mounted, spaced apart, first and second two-axle railcar trucks (8, 5), each of said trucks having a truck center. Each of said rail car has at least one deck upon which vehicles can be loaded.

Lich discloses all of the features as listed above but does not disclose an articulated rail road freight car comprising a three pack rail road car having a two truck middle unit and a pair of single truck end units connected at a cantilevered articulation. The general

concept of providing a three pack rail road car having a two truck middle unit and a pair of single truck end units connected at a cantilevered articulation to a train consist is well known in the art as illustrated by Bock et al, see fig. 2. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Lich to incorporate a pair of single truck end units connected at a cantilevered articulation at each ed of his two-truck middle unit in his advantageous articulated rail road freight car as taught by Bock et al in order to reduce the weight of the articulated railroad car.

8. Claims 48-49, 51-52, 79, 81-82 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lich (US 3,371,622) in view of Ehrlich et al (US 5,622,115).

Claims 48-49, 51-52, 79, 81-82

Lich discloses an articulated railroad freight car comprising at least first and second railcar units (3, 1) connected at a cantilevered articulation (51), said railroad freight car (20) having a first end, a second end, and a releasable coupler (45) mounted at each of said first and second ends, said releasable couplers (22) being operable to permit interchangeable operation with other railroad freight cars in North American service. The first railcar unit having a first and second end (A, B), said second railcar unit having a first and second end (C, D); said second end (B) of said first railcar unit is joined to the first end (D) of the second railcar unit at a first articulation connection (51); the second railcar unit (1) is supporting upon a pair of pivotally mounted, spaced apart, first and second two-axle railcar trucks (8, 5), each of said trucks having a truck center. Each of said rail car has at least one deck upon which vehicles can be loaded. Each of said railcar unit has mutually engaging side bearing arms (33, 23).

Lich teaches all the limitations of claims 48-49, 51-52, 79, 81-82 except for an articulated railroad freight car being an auto-rack car with intermediate bridge plates to alloy vehicles to be conducted between the railcars. The general concept of providing an auto-rack car with intermediate bridge plates to alloy vehicles to be conducted between the railcars in a railroad freight car is well known in the art as illustrated by Ehrlich et al which discloses the use of an auto-rack car with intermediate bridge plates to alloy vehicles to be conducted between the railcars in a freight car, see fig. 1. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Lich to include the use of an auto-rack car with intermediate bridge plates to alloy vehicles to be conducted between the railcars in his advantageous articulated railroad freight car as taught by Ehrlich et al in order to provide a bridge between two adjacent railcars for transit of vehicles, maximize the use of the freight car.

9. Claims 57, 59, 69-71, 83 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lich in view of Bock et al (US 2,865,306).

Claims 57, 59, 69-71, 83

Lich discloses an articulated railroad freight car comprising at least first and second railcar units (3, 1) connected at a cantilevered articulation (51), said railroad freight car (20) having a first end, a second end, and a releasable coupler (45) mounted at each of said first and second ends, said releasable couplers (22) being operable to permit interchangeable operation with other railroad freight cars in North American service. The first railcar unit having a first and second end (A, B), said second railcar unit having a first and second end (C, D); said second end (B) of said first railcar unit is joined to the

first end (D) of the second railcar unit at a first articulation connection (55); the second railcar unit (1) is supporting upon a pair of pivotally mounted, spaced apart, first and second two-axle railcar trucks (8, 5), each of said trucks having a truck center. Each of said rail car has at least one deck upon which vehicles can be loaded.

Lich discloses all of the features as listed above but does not disclose an articulated rail road freight car comprising a three pack rail road car having a two truck middle unit and a pair of single truck end units connected at a cantilevered articulation. The general concept of providing a three pack rail road car having a two truck middle unit and a pair of single truck end units connected at a cantilevered articulation to a train consist is well known in the art as illustrated by Bock et al, see fig. 2. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Lich to incorporate a pair of single truck end units connected at a cantilevered articulation at each ed of his two-truck middle unit in his advantageous articulated rail road freight car as taught by Bock et al in order to reduce the weight of the articulated railroad car.

10. Claims 60-61, 63-64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lich in view of Bock et al (US 2,865,306), as applied to claim 57 and in view of Ehrlich et al (US 5,622,115).

Claims 60-61, 63-64

Lich discloses an articulated railroad freight car comprising at least first and second railcar units (3, 1) connected at a cantilevered articulation (51), said railroad freight car (20) having a first end, a second end, and a releasable coupler (45) mounted at each of

said first and second ends, said releasable couplers (22) being operable to permit interchangeable operation with other railroad freight cars in North American service. The first railcar unit having a first and second end (A, B), said second railcar unit having a first and second end (C, D); said second end (B) of said first railcar unit is joined to the first end (D) of the second railcar unit at a first articulation connection (51); the second railcar unit (1) is supporting upon a pair of pivotally mounted, spaced apart, first and second two-axle railcar trucks (8, 5), each of said trucks having a truck center. Each of said rail car has at least one deck upon which vehicles can be loaded. Each of said railcar unit has mutually engaging side bearing arms (33, 23).

Lich and Bock et al teach all the limitations of claims 60-61,63-64 except for an articulated railroad freight car with intermediate bridge plates to alloy vehicles to be conducted between the railcars. The general concept of providing intermediate bridge plates to alloy vehicles to be conducted between the railcars in a railroad freight car is well known in the art as illustrated by Ehrlich et al which discloses the use of intermediate bridge plates to alloy vehicles to be conducted between the railcars, see fig. 1. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Lich to include the use of intermediate bridge plates to alloy vehicles to be conducted between the railcars in his advantageous articulated railroad freight car as taught by Ehrlich et al in order to increase the scope of use the articulated rail car by allowing for loading of vehicles from a deck.

11. Claim 54 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lich in view of Biegel (US 4,826,259).

Claim 54

Regarding using a freight car which is a well car unit as recited in claim 54, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Lich to include the use a freight car which is a well car unit in his advantageous system as taught by Biegel, as freight car design is a common and everyday occurrence throughout the articulated railroad car design art and the specific use of a freight car which is a well car unit would have been an obvious matter of design preference depending upon such factors as the weight of the object to be carried by the railroad car, the yield strength of the side walls material; the ordinarily skilled artisan choosing the best stress profile corresponding to a particular loading imposed on the side walls which would most optimize the cost and performance of the device for a particular application at hand, based upon the above noted common design criteria.

Allowable Subject Matter

12. Claims 3-5, 18-21, 24, 50, 53, 62, 65, 73-77, 80 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

13. Claim 16 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

14. Claims 28-29, 32-34, 41-45 stand allowable.

Response to Arguments

15. Applicant's arguments filed 11/12/03 have been fully considered but are moot in view of the new ground(s) of rejection.

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Buccos, Schunk, and Reilly are cited to show related articulated railroad freight car having cantilevered coupler and side arms.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frantz F. Jules whose telephone number is (703) 308-8780. The examiner can normally be reached on Monday-Thursday and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph S. Morano can be reached on (703) 308-0230. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7687 for regular communications and (703) 305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

Frantz F. Jules
Examiner
Art Unit 3617

FRANTZ F. JULES
PATENT EXAMINER

FFJ

December 13, 2003